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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,282	03/28/2001	John Sabat JR.	2797.2010-001	1697

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HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

NGUYEN, DAVID Q

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 11/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,282

Applicant(s)

SABAT ET AL.

Examiner

David Q Nguyen

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-15 drawn to a method for simulcasting radio signals on a common radio frequency carrier in the first group of cells located in a defined area, such that handoff does not occur while a mobile unit travels along at least a portion of the defined area between the cells, classified in class 455, subclass 561.
 - II. Claim 16, drawn to a method for transmitting/re-transmitting a communication signal from said base transceiver station to a plurality of remote transmitters physically located in another contiguous area at the same time that said communication signal is transmitted to a wireless communication device that is operating in part of said area using said tower mounted antenna, classified in class 455, subclass 4.1
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as improving the quality of service for a transmission of loss sensitive data. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. David Thibodeau, Jr., Esq. (Reg. No. 31671) on October 29, 2002 a provisional election was made without traverse to prosecute the invention of group I, claims 1-15. Affirmation of this election must be made by applicant in replying to this Office action. Claim 16 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kallander et al. (US Patent Number 5603080).

Regarding claim 1, Kallander disclose a method for providing coverage for access to a wireless communication system comprising the steps of locating wireless communication equipment in a first group of cells, the first group of cells located in a first defined area (see abstract; fig. 4C); and simulcasting radio signals on a common radio frequency (RF) carrier in the first group of cells, such that handoff does not occur while a mobile unit travels along at least

Art Unit: 2682

a portion of the defined area between the cells therein (see abstract; fig. 4c; col. 7, lines 4-36; lines 66-67; col. 7, lines 1-8).

Regarding claim 2, Kallander disclose a method for providing coverage for access to a wireless communication system comprising all of the limitations as claimed. Kallander also disclose wherein the defined area is a corridor along which vehicles travel (see abstract; fig. 4c; col. 7, lines 4-36; lines 66-67; col. 7, lines 1-8).

Regarding claim 15, Kallander disclose a method for providing coverage for access to a wireless communication system comprising all of the limitations as claimed. Kallander also disclose wherein the step of simulcasting additionally comprising the step of simulcasting a first set of radio carrier frequencies (see abstract; fig. 4c; col. 7, lines 4-36; lines 66-67; col. 7, lines 1-8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallander et al. (US Patent Number 5603080) in view of Sohner et al. (US Patent Number 5187803).

Art Unit: 2682

Regarding claim 3, Kallander disclose a method for providing coverage for access to a wireless communication system comprising all of the limitations as claimed. Kallander are silent locating wireless communication base station transceiver equipment at a cell located at a junction between at least two corridors along which vehicles travel. However, Sohner show locating wireless communication base station transceiver equipment at a cell located at a junction between at least two corridors along which vehicles travel (see fig. 1; col. 5, lines 47-52). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Sohner to Kallander so that handovers is greatly reduced in such locations since the units themselves are stationary and are moving only at low speed within the cell.

Regarding claim 4, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. Sohner also show wherein different RF carriers are assigned to the first group of cells and to the cell at the corridor junction location so that handoff from one RF carrier to another R carrier occurs only at the corridor junction location (see fig. 1). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Sohner to Kallander so that handovers is greatly reduced in such locations since the units themselves are stationary and are moving only at low speed within the cell.

Regarding claim 5, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. Kallander also disclose the corridors are subway tunnels (see col. 4, lines 12-17).

Art Unit: 2682

Regarding claim 6, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. They are silent to disclose wherein the junction is a subway station. However, it would have been obvious to one of ordinary skill in the art that wherein the junction is a subway station so that handovers is greatly reduced in such locations since the units themselves are stationary and are moving only at low speed within the cell.

Regarding claim 7, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. Kallander also disclose the corridors are railway tracks (see col. 8, lines 1-8).

Regarding claim 8, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. They are silent to disclose wherein the junction is a railway station. However, it would have been obvious to one of ordinary skill in the art that wherein the junction is a railway station so that handovers is greatly reduced in such locations since the units themselves are stationary and are moving only at low speed within the cell.

Regarding claim 9, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. They are silent to disclose the junction is at an area of expected slow speed mobility. However, it would have been obvious to one of ordinary skill in the art that the junction is at an area of expected slow speed mobility so that handovers is greatly reduced in such locations since the units themselves are stationary and are moving only at low speed within the cell.

Art Unit: 2682

Regarding claim 10, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. Kallander disclose the defined area is a tunnel, subway (see col. 2, lines 32-35). It is apparent that the defined area is an area of expected high speed mobility.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallander et al. (US Patent Number 5603080) in view of Hamilton-Piercy et al. (US Patent Number 5809395).

Regarding claim 11, Kallander disclose a method for providing coverage for access to a wireless communication system comprising all of the limitations as claimed. Hamilton-Piercy also disclose wherein the wireless communication equipment located in the first group of cells further comprises Remote Antenna Driver (RAD) equipment (see col. 12, lines 39-55; col.42; lines 60-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Hamilton-Piercy to Kallander so that wireless system can cover blind spots.

6. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kallander et al. (US Patent Number 5603080) in view of Sohner et al. (US Patent Number 5187803) and further in view of Carney (US Patent Number 5697059).

Regarding claims 12-13, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. They are silent to disclose wherein the vehicles travel along the corridor according to an expected schedule, and radio channel allocation is made to the first group of cells according to the schedule; and wherein the schedule indicates an expected time of travel of a vehicle through

Art Unit: 2682

the defined area, and the radio channel allocation is made for such times. However, Carney discloses allocating more channels to stations with expected high demand for channels during rush hours (see col. 7, lines 9-32). It is apparent that Carney's invention can be applied to combination of Kallander and Sohner's invention as the vehicles travel along the corridor according to an expected schedule, and radio channel allocation is made to the first group of cells according to the schedule; and the schedule indicates an expected time of travel of a vehicle through the defined area, and the radio channel allocation is made for such times. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Carney to Sohner and Kallander so that system can provide enough capacity to subscribers.

Regarding claim 14, Kallander disclose a method for providing coverage for access to a wireless communication system modified by Sohner comprising all of the limitations as claimed. They are silent to disclose wherein the schedule indicates an expected time of travel of a vehicle through the junction without stopping, and the radio channel allocation is maintained for mobile units crossing from one of the first group of cells into a cell located at the corridor junction location. However, it would have been obvious to one of ordinary skill in the art that wherein the schedule indicates an expected time of travel of a vehicle through the junction without stopping, and the radio channel allocation is maintained for mobile units crossing from one of the first group of cells into a cell located at the corridor junction location in order to avoid to allocate more channels to junction station when the vehicle travels through the junction without stopping.

Art Unit: 2682

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Nguyen Q. David whose telephone number is (703) 605-4254. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703)308-6739. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for all communications



David Q. Nguyen


11/01/02

NGUYEN T. VO
PRIMARY EXAMINER